

## DRY STOUT na podst 1. warki

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **32**
- SRM **26.6**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **22 %/h**
- Boil size **28.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **13.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **28.9 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 3.6 kg (78.3%) | 85 %  | 7   |
| Grain | Płatki jęczmienne         | 0.5 kg (10.9%) | 85 %  | 3   |
| Grain | Jęczmień palony           | 0.3 kg (6.5%)  | 55 %  | 985 |
| Grain | Carafa II                 | 0.2 kg (4.3%)  | 70 %  | 812 |

### Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Challenger | 25 g   | 60 min | 7 %        |
| Boil    | Challenger | 25 g   | 20 min | 7 %        |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11 g   | Safale     |

### Extras

| Type        | Name  | Amount | Use for | Time   |
|-------------|-------|--------|---------|--------|
| Water Agent | kreda | 4 g    | Mash    | 60 min |